



UNITED STATES PATENT AND TRADEMARK OFFICE

19
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/633,373 | 07/31/2003 | Keith Son | 5693P290X | 5120 |
| 48102 7590 12/29/2006 NETWORK APPLIANCE/BLAKELY 12400 WILSHIRE BLVD SEVENTH FLOOR LOS ANGELES, CA 90025-1030 | | | EXAMINER VIDWAN, JASJIT S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2182 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 12/29/2006 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/633,373

Applicant(s)

SON, KEITH

Examiner

Jasjit S. Vidwan

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-18,20-22 and 24-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-18,20-22 and 24-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 5, 8, 9, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22, 25, 26, 28, 29, 30, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada, European Patent Application EP 0939360A2 [**herein after Okada**] and Schimke et al U.S. Pub No: 2002/0174197 [**herein after Schimke**] and further in view of Numata et al, U.S. Patent No: 5,625,840 [**herein after Numata**].

3. As per Claim 1, 5, 9, 14, 18, 22, 26, 31, 32, Okada teaches an apparatus including:

(a) First housing including a first ATA disk drive having a parallel ATA disk drive coupling element [**Fig. 2, Elements 8a**], first adaptor in said first housing [**Fig. 1, Element 4a**], said first adaptor including an ATA disk drive coupling element coupled to said first ATA disk drive [**Fig. 1, Element 7a**], and at least two backplane coupling elements in said first housing [**Fig. 1, Elements 5a and 6a**], said switch being capable of being coupled to a switching signal [**Fig 2b, Element 11a**].

(b) Second housing including a second ATA disk drive [**Fig. 1, Element 8b**], second adaptor in said second housing [**Fig. 1, Element 4b**], said second adaptor including an ATA disk drive coupling element coupled to said second ATA disk drive [**Fig. 1, Element 7b**], and at least two backplane coupling elements in said second housing [**Fig. 1, Elements 5b and 6b**], said switch being capable of being coupled to a switching signal [**Fig 2b, Element 11a** – Each adapter 4a-4f has own switch shown in Fig 2b].

Okada fails to teach an apparatus wherein the two coupling elements are Fiber Channel coupling elements wherein the Fiber channel backplane is coupled to first and second housing. Schimke teaches the above limitations of having Fiber Channel interfaces coupled to FC backplane [see **Schimke, Page 2, Paragraph 0020**, "Devices 120-130 are typically peripheral devices such as storage devices with FC interfaces and are coupled to the FC-AL on a backplane provided by hub"].

One of ordinary skill in the art at the time of Applicant's invention would have clearly recognized the advantage of combining teachings of Okada with that of Schimke in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system [**Page 2, Paragraph 0020**]. It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the two teachings in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system [**Page 2, Paragraph 0020**].

Okada and Schimke fail to teach a serial-to-parallel converter in said first housing, said serial-to-parallel converter being coupled to said parallel disk drive coupling element, wherein said serial-to-parallel converter is capable of receiving a set of serial disk drive signals and emitting a set of parallel disk drive signals. However, Numata teaches the above limitation of having a serial-to-parallel converter [**Fig. 5, element 84**], said serial-to-parallel converter being within said disk drive housing and coupled to said disk drive coupling element [**Fig. 5, element 14**], wherein said serial-to-parallel converter is capable of receiving a set of serial disk drive signals and emitting a set of parallel disk drive signals [**Col. 8, Lines 35-38 – also see Col. 8, Lines 60-67**].

One of ordinary skill in the art at the time of Applicant's invention would have clearly recognized the advantage of combine the above teachings in order to take advantage of having faster serial ATA disk drives communicate effectively with parallel input signals of the host computers.

Art Unit: 2182

4. As per Claims 4, 8, 11, 12, 17, 21, 25, 28 and 29, teachings of Okada as modified by Schimke and Numata teach an Apparatus wherein said switch includes an input port capable of receiving instructions, said instructions being interpretable by a computing device to control said switch **[see Okada, Col. 4, Paragraphs 0021-0023]**.

5. As per Claims 13, 15, 20 and 30, teachings of Okada as modified by Schimke and Numata teach an Apparatus wherein said second switch is capable of being coupled to a second switching signal **[see Okada, Col. 4, Paragraphs 0022, Each adaptor has own switch as shown in Figure 1]**.

Claims 3, 7, 10, 16, 20, 24, 27, 33, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada, European Patent Application EP 0939360A2 [herein after Okada], Schimke et al U.S. Pub No: 2002/0174197 [herein after Schimke] and Numata et al, U.S. Patent No: 5,625,840 [herein after Numata] and further in view of Gallagher et al U.S. Patent No: 6,742,068 [herein after Gallagher].

6. As per Claims 3, 7, 10, 16, 20, 24, 27, 33, 34 and 35 Okada teaches the limitations of Claims 1, 5, 9, 14, 18, 22 and 26, however fails to teach an Apparatus wherein each of said fiber channel back-plane coupling elements includes an port capable of being coupled to a power source, whereby said ATA disk drive coupling is capable of receiving input power from a selectable source. Gallagher however teaches the above limitations of Apparatus wherein each of said fiber channel back-plane coupling elements includes an port capable of being coupled to a power source, whereby said ATA disk drive coupling is capable of receiving input power from a selectable source **[see Gallagher, Col. 6, Lines 4-21]**.

7. It would have been obvious to one skilled in the art at the time of Applicant's invention to have a power port on the Fiber Channel backplane in order to provide power to the system **[see Gallagher, Col. 1, Lines 10-25]**. It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the teachings in order to provide power to the overall system **[see Gallagher, Col. 1, Lines 10-25]**.

Response to Arguments

8. Applicant's arguments, see "Remarks/Arguments", filed 10/02/2006, with respect to the rejection(s) of claim(s) 1, 5, 9, 14, 18, 22 and 26 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Numata et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV
12/22/06


KIM HUYNH
SUPERVISORY PATENT EXAMINER

12/22/06